What is claimed is:

1. A transmission line comprising:

a signal strip;

a resistive layer opposed to the signal strip with a dielectric layer disposed between the resistive layer and the signal strip; and

a ground conductor electrically connected to the resistive layer, wherein,

a high frequency current is induced in the resistive layer through capacitance formed by the dielectric layer between the signal strip and the resistive layer when a high frequency signal of a predetermined frequency is transmitted through the signal strip, and when resistance per unit length generated when the high frequency current flows in the resistive layer, and between the resistive layer and the ground conductor, is defined as an additional resistance, and resistance per unit length generated when the high frequency current flows through the ground conductor is defined as a ground resistance, the additional resistance is larger than the ground conductor.

2. The transmission line according to claim 1, wherein a length of the resistive layer is 1/16 or more of an effective wavelength λ of a signal of an upper limit frequency of the high frequency signal.

3. The transmission line according to claim 1, wherein conductivity of a material constituting the resistive layer is smaller than conductivity of the ground conductor.

4. The transmission line according to claim 1, wherein the conductivity of the material constituting the resistive layer is in the range of 1×10^3 S/m or more and 1×10^7 S/m or less.

5. The transmission line according to claim 4, wherein the conductivity of the material constituting the resistive layer is in the range of 1×10^3 S/m or more and 1×10^5 S/m or less.

6. The transmission line according to claim 1, wherein the resistive

layer is formed from at least one material selected from the group consisting of chrome, nickel chrome alloy, iron-chrome alloy, thallium, a chrome-silicon oxide composite, titanium, an impurity doped semiconductor, and polycrystalline or amorphous semiconductors formed by polysilicon or the like.

7. The transmission line according to claim 1, wherein a width of the resistive layer is larger than a width of the signal strip.

8. The transmission line according to claim 7, wherein the resistive layer is formed in such a fashion that the whole width thereof is opposed to the signal strip.

9. The transmission line according to claim 8, wherein

the signal strip is formed on a top face of the dielectric layer;

the resistive layer is formed between the substrate and the dielectric layer;

the ground conductor is formed on a bottom face of the substrate; and

the restive layer is connected to the ground conductor by way of a penetrating conductor penetrating the substrate.

10. The transmission line according to claim 9, wherein the penetrating conductor is formed on an edge of the resistive layer.

11. The transmission line according to claim 9, wherein a plurality of the penetrating conductors are formed along a longitudinal direction of the resistive layer with a spacing.

12. The transmission line according to claim 8, wherein

the signal strip is formed on a top face of the dielectric layer;

the resistive layer is formed between the substrate and the dielectric layer;

the ground conductor is formed on the top face of the dielectric layer; and

the resistive layer is connected to the ground conductor by way of a

penetrating conductor penetrating the dielectric layer.

13. The transmission line according to claim 8, wherein

the signal strip is formed between the substrate and the dielectric layer;

the resistive layer is formed on a top face of the dielectric layer; and

the ground conductor is formed on the top face of the dielectric layer in such a fashion that the ground conductor is connected to the resistive layer.

14. A semiconductor integrated circuit device comprising:

a main signal circuit on which at least one active element is disposed; and

a bias supplying circuit having a transmission line and supplying bias to the main signal circuit through the transmission line, wherein

at least a part of the transmission line is the transmission line according to claim 8.

15. The semiconductor integrated circuit according to claim 14, wherein

the transmission line has a first transmission line connected to the main signal circuit and a second transmission line connected to the first transmission line;

the first transmission line is formed by a coplanar waveguide or a microstrip;

the second transmission line is formed by at least a part of the transmission line; and

an end of the first transmission line closer to the main signal circuit is connected to a ground terminal through a bypass condenser.

16. The semiconductor integrated circuit according to claim 14, wherein

the semiconductor integrated circuit device is a single-stage high frequency amplifier having an amplifying transistor as the at least one

active element; and

the bypass supplying circuit is at least one of an input side circuit that is of a front stage side with respect to the active element of the main signal circuit and an output circuit that is of a rear stage side with respect to the active element of the main signal circuit.

17. The semiconductor integrated circuit according to claim 16, wherein

the semiconductor integrated circuit device is a multi-stage high frequency amplifier having a plurality of amplifying transistors as the at least one active element; and

the bypass supplying circuit is at least one of an input side circuit that is of a front stage side with respect to the active element of the main signal circuit, an output circuit that is of a rear stage side with respect to the active element of the main signal circuit, and an interstage circuit that is disposed between the plurality of amplifying transistors.